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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/402,021	09/27/1999	MINORU TSUJI	KOIK-P9143	5446

7590 09/13/2004

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EXAMINER

SELLERS, DANIEL R

ART UNIT

PAPER NUMBER

2644

DATE MAILED: 09/13/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/402,021	TSUJI ET AL.
	Examiner	Art Unit
	Daniel R. Sellers	2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-25 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 27 September 1999 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>9/27/99, 4/14/00 and</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____ .

DETAILED ACTION***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the processing method characterized in using information indicating the number of times of reading other data must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: steps S3 and S4 in figure 7, and items 34, 35, and 36 in figure 15. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 4, it is not clear what the method of retention is.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-4, 15, 16, and 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Shishido et al., U.S. Patent 5,869,782.

7. Regarding Claim 1, A digital signal processing method for reproducing digital signals characterized by:

being adapted to temporarily store a data block to be used repeatedly at least twice out of a plurality of data blocks obtained at least by dividing a digital signal on a time base.

See Shishido et al., column 2, lines 4-18 and col. 25, lines 27-32. Shishido et al. disclose a method of MIDI file compression, wherein a block obtained by dividing a signal on a time base to be used repeatedly within a file is stored only once in the compressed file along with

information to retrieve the original file.

8. Regarding claim 2, the further limitation with respect to claim 1,

... characterized in that said digital signal
is taken into a recording medium by way
of a network before it is reproduced.

See Shishido et al., column 2,
lines 34-38 and lines 45-49.
Shishido et al. disclose that a
MIDI musical performance file
may be taken into a recording
medium by way of a network.

9. Regarding claim 3, the further limitation with respect to claim 1,

... characterized in that said digital signal
is stored in a recording medium in
advance.

See Shishido et al., column 1,
lines 49-51. Shishido et al.
disclose a digital signal recorded
in a recording medium.

10. Regarding claim 4, the further limitation with respect to claim 1,

... characterized in that it uses
information indicating the period of time

See Shishido et al., column 2,
lines 11-14. Shishido et al.

during which said data block to be used repeatedly at least twice is retained.

disclose that the compressed file records information indicating the start time and the length of the data block to be used repeatedly.

The start time used with the length indicate the period of time the data block is to be used.

11. Regarding claim 5, the further limitation with respect to claim 4,

... characterized in that said information indicates the period of time from the time when said data block to be used repeatedly at least twice is read in to the time when said data block is deleted.

See Shishido et al., column 9, lines 19-21, 47-48, and 55-57 column 10, lines 11-22, and figure 11. Shishido et al. disclose a file that has timing information indicating periods of time to use data blocks and a system using flags to determine how the file is reproduced from memory. It is inherent that the flags used indicate when the memory can be deleted safely.

12. Regarding claims 7-9, and 11-13, the further limitations with respect to claim 4, refer to claim 5.

13. Regarding claim 10, the further limitation with respect to claim 4,

... characterized in that said information
is added to said data block to be used
repeatedly at least twice as part thereof. See Shishido et al., column 2
lines 17-18. Shishido et al.
disclose information being added
to the data block to compress the
file.

14. Regarding claim 15, a digital signal reproducing apparatus for reproducing digital signals, characterized by comprising:

a first decoding means for separating a data block to be used repeatedly at least twice from the remaining data blocks of a plurality of data blocks obtained at least by dividing a digital signal on a time basis and decoding said data block;

Refer to claim 1. Furthermore see Shishido et al., column 4, lines 11-19. A first decoding means is disclosed.

a retaining means for temporarily retaining said data block to be used

See Shishido et al., column 9, lines 41-51 and lines 55-57.

repeatedly at least twice from said first decoding means; and

Shishido et al. disclose a temporary retaining means for storing all the data blocks.

a second decoding means for decoding said remaining data blocks from said first decoding means and said data block to be used repeatedly at least twice from said retaining means.

See Shishido et al., column 4, lines 11-19. Shishido et al. disclose a second decoding means for decoding remaining data blocks.

15. Regarding claim 16, the further limitation with respect to claim 15,

... characterized in that said first decoding means extracts information indicating the period of time during which said data block to be used repeatedly at least twice is retained from said data block.

Refer to claim 4, and see Shishido et al., column 24, lines 60-63. Shishido et al. disclose a decoding means, wherein time information is also decoded.

16. Regarding claim 17, the further limitation with respect to claim 16,

... characterized by further comprising a control means for deleting said data

Refer to claim 5, and see Shishido et al., column 9,

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block to be used repeatedly at least twice from said retaining means according to said information extracted by said first decoding means.

lines 48-50. Shishido et al. disclose a control means for reproduction after decoding.

17. Regarding claim 18, the further limitation with respect to claim 15,

... characterized in that said second decoding means decodes each of said data blocks, using identification information for identifying each of said data blocks.

See Shishido et al., column 4, lines 11-19 and column 26, lines 25-34. Shishido et al. disclose a second decoding means, where it uses information to identify the coded blocks by type.

18. Regarding claim 19, the further limitation with respect to claim 15,

... characterized in that said second decoding means decodes each of said data blocks, using said identification information and additionally reproduction timing information.

Refer to claims 16 and 18.

19. Regarding claims 20 and 22, refer to claims 1, 4, and 10.

20. Regarding claim 21, the further limitation with respect to claim 20,

... said data block to be used repeatedly at least twice represents data blocks showing a high degree of similarity.

See Shishido et al., column 15, lines 46-58. Shishido et al. further disclose a method of differential encoding to obtain a data block showing a high degree of similarity to be used at least twice.

21. Regarding claim 23, the further limitation with respect to claim 22,

... said data block to be used repeatedly at least twice represents data blocks showing a high degree of similarity.

Refer to claims 1, 4, 10 and 21.

22. Regarding claim 24,

A signal recording medium adapted to record a plurality of data blocks obtained at least by dividing a digital signal on a time base, characterized by recording a

Refer to claims 1 and 4.

data block usable repeatedly at least twice with corresponding information for indicating the period of time for temporarily retaining said data block.

23. Regarding claim 25,

A program recording medium carrying a recorded program characterized by comprising:

A first decoding step of separating a data block to be used repeatedly at least twice from the remaining data blocks of a plurality of data blocks obtained by dividing a digital signal on a time basis and decoding said data block to be used repeatedly at least twice;

Refer to claim 15.

A retaining step of temporarily storing said data block to be used repeatedly at least twice from said first decoding step; and

A second decoding step of decoding said

remaining data blocks from said first decoding step and said data block to be used repeatedly at least twice from said retaining step.

Claim Rejections - 35 USC § 103

24. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shishido et al. as applied to claim 4 above, and further in view of Fiala et al., U.S. Patent 4,906,991.

26. Regarding claim 6, the further limitation with respect to claim 4,

... characterized in that said information indicates the number of times of reading other data after reading in said data block to be used repeatedly at least twice.

Shishido et al. do not disclose information regarding the number of times other data is read.

Shishido et al. do disclose a method of dividing a MIDI signal into blocks on a time basis, wherein a block can be retained and used repeatedly. Fiala et al. do not teach an audio or video system that uses blocks repeatedly, however they teach a textual compression method wherein strings are used repeatedly. Fiala et al. teach a method where information indicates the number of times other data is read after reading the data block to be used repeatedly (col. 9, lines 7-12). It would have been obvious to one of ordinary skill in the art to have combined the teachings of Shishido et al. and Fiala et al. to create the claimed invention. The information indicating the number of times other data is to be read could provide a more compact file where before timing information was used.

27. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shishido et al. as applied to claim 4 above, and further in view of Veltman, U.S. Patent 5,481,543.

28. Regarding claim 14, the further limitation with respect to claim 4,

... characterized in that, when said Shishido et al. do not disclose
information is expressed by a this feature.
predetermined bit string, said data block
to be used repeatedly at least twice is
retained until time when the processing
operation of reproducing all the data

blocks is over.

Shishido et al. do disclose a method of compressing MIDI signals by dividing on a time-basis. Veltman discloses a buffer system to be used in a MPEG audio and video signal environment. Veltman discloses the MPEG video coding standard, whereby a video frame is encoded into three different types of pictures, as discussed previously. Veltman also discloses that timing information is included in the MPEG video standard, and teaches a buffer that uses the timing information to decide what is retained. It would have been obvious to one of ordinary skill in the art to have combined these teachings of Shishido et al. and Veltman. It would be advantageous in the use of coding a repeated melody during a song, where the song ends with the melody being repeated for a last time.

Conclusion

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rosenau et al., U.S. Patent 5,598,352, Gannon, U.S. Patent 5,990,407, and Abrams et al., U.S. Patent 6,658,309.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel R. Sellers whose telephone number is 703-605-4300. The examiner can normally be reached on Monday to Friday between 9am and 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on 703-305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DRS



FORESTER W. ISEN
SUPERVISORY PATENT EXAMINER